DOCUMENT RESUME

ED 336 543 CE 058 889

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TITLE Innovation in Tertiary Education in the Caribbean: Distance Teaching in the Faculty of Education at the University of the West Indies. Verhandelingen No. 44.
INSTITUTION Centre for the Study of Education in Developing Countries, The Hague (Netherlands).
REPORT NO ISBN-90-6443-831-5
PUB DATE Feb 90
NOTE 26p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Access to Education; *Distance Education; *Educational Innovation; Educational Technology; Foreign Countries; Higher Education; Material Development; Postsecondary Education; Program Development; Program Implementation; *Teacher Education; *Teleconferencing; Telephone Communications Systems
IDENTIFIERS *University of the West Indies (Jamaica)

ABSTRACT

The University of the West Indies Distance Teaching Experiment (UWIDITE) is an example of a conventional institution with a distance teaching department. The UWI is one of two regional universities serving a region covering 17 countries. Some countries are fairly prosperous; others are suffering severe economic difficulties. All the territories are culturally diverse, but their continuous political and economic ties with Britain have left the mark of the British on their educational systems. Governments have been critical of UWI's failure to respond to needs of the various territories. UWIDITE has enabled UWI to respond to the challenge of making education accessible. The system consists of a telephone link-up among seven countries. Each UWIDITE Center has a teleconferencing room equipped with microphones, loudspeakers, slow scan television, a telewriter, a scrambler, and a microcomputer. A priority of distance teaching has been teacher training, and a program leading to a Certificate in Education has been offered since 1983. The same lecturers who teach the conventional courses teach the UWIDITE courses and develop the materials. The program has not attracted as many students as expected. Student performance is not as high as that of students in conventional programs. Hardware maintenance, material development, and student feedback need to be improved. (13 references) (YLB)

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Innovation in tertiary education in the Caribbean: distance teaching in the faculty of education at the university of the West Indies

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CIP-GEGEVENS KONINKLIJKE BIBLIOTHEEK, DEN HAAG

Jennings, Zellyne D.

Innovation in tertiary education in the Carribean: distance teaching in the Faculty of Education at the University of the West Indies / Zellyne D. Jennings. - The Hague: Centre for the Study of Education in Developing Countries (CESO). - (CESO verhandelingen; no. 44)
Met bibliogr.
ISBN 90-6443-831-5
SISO am-west 489.33 UDC 37.018.43+377.5/.8(729)
Trefw.: afstandsonderwijs; Caraïbisch gebied / hoger onderwijs; Caraïbisch gebied.

Zellyne D. Jennings

Verhandelingen no. 44

Innovation in tertiary education in the Caribbean: distance teaching in the faculty of education at the university of the West Indies

Centre for the study of education in developing countries

The Hague, February 1990

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I. INTRODUCTION: THE UNIVERSITY OF THE WEST INDIES DISTANCE TEACHING EXPERIMENT (UWIDITE)

> "(...) We have in UWIDITE something with a remarkable potential for impact on education and other public service within our community (...) the costs are not as high as we would have thought some years ago. There seems every reason why the experience of the Caribbean should be studied carefully by other regions around the world" (Lalor 1987: 23).

Distance Education has been described as an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner (Perraton 1985: 80). The systems, projects and institutions worldwide that teach 'at a distance' now reflect an enormous diversity. They range from the use of correspondence courses in such countries as Botswana, Lesotho and Swaziland, the use of educational radio for inservice teacher training in the Philippines and Thailand, the use of educational television for teaching rural school children in Malaysia to such massive enterprises as China's Central Radio and Television universities which between 1979-1985 have enroled some one million students, graduating approximately 100,000 per annum (Hawkridge 1988). In the U.S.A. about seventy conventional universities offer courses at a distance to some 150,000 students while in the U.S.S.R. there are some 1,200 distance teaching institutions. Organizations catering for distance learning have sprung up as far afield as India, Italy, Venezuela, Hong Kong and Sri Lanka (Kaye 1988).

A major justification for distance education is that it is cheaper than traditional forms of education. It is also viewed both as a significant means of overcoming barriers of distance (e.g. use of satellite at the University of the South Pacific), and as a way of widening the educational opportunities of people who, because of their geographical location or position in society, would otherwise have found it difficult to get access to education.

The United Nations University/International Centre for Distance Learning database classifies the 800 distance education programmes from some 500 institutions worldwide as follows: those set up exclusively to provide distance education courses (eg. 'Open Universities') (Type A); conventional institutions with distance teaching departments (Type B); conventional institutions which have distance teaching courses but no specific department established (Type C) (Kaye 1988).

This paper focuses on an example of Type B: the University of the West Indies Distance Teaching Experiment (UWIDITE). Apart from a description of UWIDITE itself, the paper will make special reference to the Certificate in Education programme offered by the Faculty of Education on the UWIDITE system (CED(UWIDITE)) with particular emphasis on inputs, the development of print materials and the interactive process. An assessment of the outcomes of the CED(UWIDITE) will be attempted with a view to ascertaining its cost effectiveness and efficiency in relation to the intra-mural programme offered full-time (CED(F/T)) in the Faculty. Finally, the paper will draw attention to certain issues which need to be addressed if UWIDITE is to become effectively institutionalized in the Caribbean educational systems. By so doing it is hoped that other developing countries will learn from the experiences of a regional university striving to grapple with the demand for further education which far outstrips the economic, physical and human resources of the countries that support it.

It would be instructive to the reader unfamiliar with the Caribbean to put the discussion in context by giving some background information which throws light on the physical, economic, educational and cultural characteristics of the region.

II. CONTEXT

2.1. Physical: economic

The UWI is the only one of two surviving regional universities (the other being the University of the South Pacific). It serves a region covering 17 countries [1] each varying greatly in size and population: from Montserrat with an area of 39 sq.mls, and a population of 12,000, Jamaica with an area of 4,411 sq.mls, and a population in excess of 2 million, to Guyana with a population of less than 1 million in an area of 83,000 sq.mls. Distances between these countries are enormous, some taking over seven hours by air and many with no direct connections.

While some of the countries are fairly prosperous due to thriving industries in tourism and banking (eg. the Bahamas and the Cayman Islands with per capita incomes of US$4,200 and US$9,400 respectively), others are suffering severe economic difficulties. Trinidad and Tobago, for example, is suffering the consequences of a declining oil industry, while Jamaica, barely recovering from a downturn in its bauxite industry, had a severe blow dealt to its agricultural base (sugar and banana industry) by a devastating hurricane which struck the island is September 1988. Such economic difficulties have had serious repercussions, not least in the educational systems of the region.

2.2. Socio-cultural: educational

All the territories in the Anglophone Caribbean are culturally diverse, but perhaps none more so than Belize. The Belizeans are a fusion of Creoles (Afro-Belizeans) who comprise some 50% of the population; Mestizos (of Hispanic-Indian origin) who make up some 25% of the population; Black Caribs (descendants of Africans and Carib Indians) and descendants of the Mayans. Other ethnic groups include East Indians, Chinese, Lebanese and German-speaking Mennonites. Social class differences persist in all territories (but remains most marked perhaps in Jamaica) and with the rising cost of education, the provision of equality of educational opportunity remains an elusive ideal in these Caribbean territories.

Despite their differences, the fact that they have all had continuous political and economic ties with Britain, has left the mark of the British on their educational systems. For example, English is the language of the school's curriculum, despite the fact that local creole dialects, flavoured with French or African vernacular, are the home languages of the majority. All the territories have secondary schools which are not unlike the British grammar school pursuing a predominantly academic curriculum designed for entry into Colleges or Universities or into the more prestigious occupation in the society. The UWI itself is the successor institution to the University College of the West Indies (UCWI) which began teaching in 1948 as an affiliate of the University of London "and therefore cribb'd, cabin'd and confin'd within the London curriculum" (Williams 1974: 6). The late Prime Minister of Trinidad and Tobago was critical of all colonial universities that imitated the British model, thereby paving the way for cultural domination, intellectual dependence, and the subordination of indigenous values, customs and language. The UCWI did not become a fully flegded university (UWI) till 1962. All that time it had four campuses: one at Mona (Jamaica), St. Augustine (Trinidad), Cave Hill (Barbados) and Turkeyen (Guyana). The latter, however, withdrew in 1963 and

established its own national university "to promote teaching and research relevant to the needs of a developing Guyana" (Williams 1974: 5).

III. THE UWI: RESPONSE TO PRESSURE FROM ITS PARTICIPATING COUNTRIES

The UWI has eight Faculties: Agriculture, Arts & General Studies, Education, Engineering, Law, Natural Sciences, Medical Sciences and Social Sciences. Our concern in this paper is with the Faculty of Education which is based on the three campuses. In the non-campus countries (NCCs), the work of the University is carried out in Extra Mural Centres (EMCs) which are integral parts of the Department of Extra Mural Studies. This department sustains an extensive outreach programme. The EMCs are managed by Resident Tutors whose responsibilities include the development and maintenance of largely adult education programmes appropriate to the needs of the relevant territory and liaising between the University, the governments and the respective communities.

For many years governments in the region have been demanding that the UWI should be more responsive to the needs of their various territories. In 1977, the government of Trinidad and Tobago produced a White Paper in which it was severely critical of the failure of the UWI "to adopt the leadership role in any national effort in science and technology" (quoted in Peter-Williams 1981: 293). The NCCs have been especially critical of the UWI. They feel that they miss out on the benefits that the campus countries get from the UWI: for example, the employment opportunities for the non-academic staff and benefits from research which is conducted largely in the campus countries. The NCCs are particularly concerned about the brain drain of their graduates to the campus countries in the face of their own acute shortage of skilled manpower and technical expertise (Bird 1984).

The situation has been ameliorated somewhat by the restructuring of the UWI in 1984. Restructuring has not only made each campus more responsive to the needs of the respective country, but it has facilitated the establishment of an office of University Services (headed by a Pro Vice Chancellor at the Cave Hill campus) which has responsibility for servicing the needs of the NCCs in the Eastern Caribbean. Problems, however, persist with the financing of the University. This is made up of contributions of each participating government to an approved University Grants Committee budget, based on the economic cost[2] per student. Because of their own economic constraints, many of the NCCs have not been able to meet their financial commitments, thereby rendering the UWI several million dollars in debt. Yet it is against this background of financial constraints that the NCCs are now insisting on "positive and tangible guarantees of (...) finance and advice for the building up of their tertiary institutions; a guarantee of support in obtaining external financing for tertiary education(...)" (Bird 1984: 421). "The future of the regional university," writes Bird (ibid), "now hangs in the balance." How was the University to meet such pressing demands with minimal resources - human and financial? The view of the UWI administrative hierarchy was that the way forward was in telecommunications since "communications technologies will eventually revolutionize the delivery of education and other services" (Lalor 1982: 196).

The UWI, in fact, had begun experimenting with telecommunications since 1978 with Project Satellite[2]. This experiment was well received and funds were subsequently obtained to carry out a Caribbean Regional Communications Study (CARCOST). This was a feasibility study to determine whether and how interactive distance teaching and teleconferencing could contribute to education and the public service in the Caribbean. The CARCOST report (Lalor 1982) recommended a five-year pilot project with particular emphasis on the teaching of the first year of the B.Sc. (Social

Sciences), In-Service Teacher Training, Health and Agriculture courses and University Administration. The report endorsed the use of an interactive rather than a broadcast system and stressed the need for the use of print, audio-visual and other media.

IV. UWIDITE

4.1. Organizational Structure

UWIDITE eventually came on stream in March 1983 under an agreement for funding for three years by the United States Agency for International Development. USAID's major contractor, the Washington-based Academy for Educational Development (AED), was responsible for planning, the provision of equipment and installation, the training of personnel and the provision of technical assistance. An AED field officer was based at the Mona campus for some eight months from July 1982.

A Pro-Vice Chancellor (PVC) on the Mona campus serves as the Director of UWIDITE and PVCs also co-ordinate UWIDITE activities on the St. Augustine and Cave Hill campuses. Resident Tutors serve a similar function in the NCCs. The UWIDITE Director has an Advisory Committee including the Deans of all the Faculties, the Director of the Extra Mural Department, UWIDITE-campus Co-ordinators, the University Bursar and Librarian, the Campus Librarians and representatives of each Campus Administration. The UWIDITE Project Officer, who oversees the day to day operations and programme planning in the Project Office at Mona, is also included.

4.2. The System: equipment

The system consists of a telephone link-up between seven countries (see fig. 1). From the Mona campus the signal travels via telephone lines to the Kingston offices of the Jamaica International Telecommunications Company (JAMINTEL). From there it goes by microwave circuit to JAMINTEL's satellite ground station located in the eastern part of the island. The signal is then relayed via satellite to a ground station in N.E. Trinidad and by a microwave link to Cable and Wireless in St. Lucia. From there it goes via microwave circuits to Dominica, Antigua, and by tropospheric scatter to Barbados. The final connection to all the UWIDITE Centres is by telephone link-up.

Each Centre has a teleconferencing room equipped with at least six microphones, two loudspeakers, a slow scan television (SSTV) and a telewriter [4]. Each campus site has a scrambler which enables discussion of confidential matters, including examinations. Each site also has a micro-computer for document transmission.

V. THE CERTIFICATE IN EDUCATION PROGRAMME

The CARCOST report identified teacher training as a priority for distance teaching and advocated that "the cheapest effective telecommunication programme would probably be at the level of the UWI Certificate in Education" (Lalor 1982: 97).

Since 1961, the UWI at Mona has offered a one year full-time programme leading to a Certificate in Education (CED(F/T)) in areas such as Education Management and Supervision and the teaching of subjects (i.e. Maths, English, Reading, Social Studies, Science). The teaching of the Hearing Impaired (THI) was added later when the Jamaica Association of the Deaf made funds available for a lecturer in the area. The THI had ten places, four of which were sponsored by the Government of Jamaica. The NCCs were rarely able to take up the remaining places due to lack of funds. Thus a programme that enabled their candidates to be trained on an inservice basis would be of great benefit to them.

Although there are slight variations according to the option selected, the CED(F/T) consists of 100 hrs of study in foundation areas plus electives, 120 hrs of content and methodology in the area of specialization and a Practicum of between 90-120 hours. Students are also required to do a study based on the Practicum. For the award of the CED (F/T), candidates must achieve a satisfactory standard in the theoretical aspects of the programme (i.e. foundations + elective + area of specialization), the Practicum, and they must also pass the study.

The Certificate was first offered via UWIDITE (CED(UWIDITE)) in the 1983/84 academic year in the THI and Teaching of Reading. It was governed by the same regulations as for the CED(F/T), except that whereas the latter lasted three terms, the CED(UWIDITE) lasted four terms and required candidates to be teaching full-time in a school in the area of specialization selected for study. Classes were held after regular school hours. [5] During the first three terms, candidates read courses in the foundation areas and subject specialization. The Practicum commenced in the second term, through to the end of the first academic year and into the fourth term (i.e. first term of second academic year commencing October). Final assessment took place by the end of November and candidates were required to submit their studies by the end of December. Examination results are normally issued by the following February. Thus a cohort of CED(UWIDITE) candidates who commenced studies in October 1983, would complete by February 1985.

VI. INPUTS

6.1. Staffing

In an effort to maintain parity of standards, the same lecturers who taught in the CED(F/T) were also asked to teach in the CED(UWIDITE). They were also asked to develop the print materials. With the exception of two lecturers at the Cave Hill campus, all other CED(UWIDITE) lecturers were from Mona. They were paid for their work on the UWIDITE programme which they took on in addition to their full work loads in the intra-mural programmes including Higher Degree work. In the first three years of the programme the specialist lecturers at Mona also travelled to the territories to examine students in the Practicum in their area of specialization. Because of the costliness of travel from Jamaica to the Eastern Caribbean, in an effort to become more cost-efficient, since 1986 the UWIDITE Administration asked that such examining duties be conducted by qualified University staff at St. Augustine or Cave Hill.

In each country local supervisors were appointed in each area of specialization (e.g. Reading, Maths), their main responsibilities being to assist students with any problems related to their studies, to supervise the Practicum, to consult with the University examiner on the overall programme of the students they supervise and to guide the students in the preparation of their studies.

6.2. Print Materials: development

The CARCOST report stressed the need for teaching materials in the form of booklets, charts and audio cassettes. The print materials were considered essential not only because of the poor library facilities particularly in the NCCs, but also because the provision of published textbooks for the courses would have been extremely expensive and prolonged and unachievable delivery times were envisaged. Moreover, because the system was expected "to be fully interactive with any site being able to originate programmes and discussions" (Lalor 1982: 17S), it was considered essential that the students had the materials in good time in advance so that they could read them thoroughly and go to sessions prepared.

Staff members involved in the programme in its first year were given about three months to produce a manuscript of their teaching materials. It normally takes an additional three months to produce the manuscripts in booklet form and deliver them to each country. Production involved putting the manuscript on a word processor, doing any graphic work necessary and editing (usually by the writer). Each unit is reviewed by an independent assessor in the area of specialization following which the author made amendments where necessary. The final document is compiled on a word processor and then printed from there onto stencils and run off in the usual manner. After collation, the materials are sent by courier to all the UWIDITE Centres.

VII. PROCESS: THE INTERACTIVE SESSIONS

AED experts who inducted local personnel into the use of the UWIDITE system, recommended the use of a roll call in the interactive sessions in an effort to get to know the students individually. The writer tried this initially but found it too time-consuming especially when students tended to 'trickle' into the sessions late. Directing a question to a specific student proved more effective in that over time it enabled the tutor to learn to associate a name with a voice (rather than a face as in face-to-face interaction).

Ideally, students, having read the materials beforehand, should have come to the sessions prepared to initiate the discussion by identifying points that needed explanation, expansion, etc. In the writer's experience, it was rare to find students who had read the materials beforehand. On one occasion a tutor had to abandon a session because none of the students in any of the seven sites had done any reading. Such action is infrequently taken, however, because the students have to travel such distances to attend the sessions. Invariably, the tutor has to commence the session with a 'mini lecture' capsulizing the main points the students should have grasped.

Experience showed that interactive sessions went better when the students were given specific sections of a booklet to read or set questions to prepare (rather than being left to progress at their own rate through the booklet). Tasks to be done in groups by country also led to some stimulating presentations. However, some students had difficulty working in groups due to transportation problems in getting to and from the UWIDITE Centres which left them little or no time to meet.

A source of frustration to many tutors is the frequent breakdown of the telecommunication system. At times a site could be off line for a whole session (1½ hrs.) in consecutive weeks. If time is available on the system, the tutor does a 'make-up' session with the relevant site; otherwise, the students have to rely entirely on the printed materials. In anticipation of such an eventuality, the Faculty had earmarked the local supervisors as the appropriate persons to do such 'make-up' sessions locally. However, to date this has not materialized as the local supervisors rarely attend the interactive sessions.

7.1. Student Outcomes

Perraton [1987] argues that distance education is valuable to small nation states in that it can help to overcome problems of local or national isolation. However, distance education programmes only remain viable if student numbers for each course remain large enough. The CED(UWIDITE) has not attracted as large a number of students as expected and, indeed, over the years has suffered a decline in student numbers (see Table 1). With reference to the UWIDITE system, the Minister of Education for Antigua at a conference held at Mona in 1987 admitted: "Our teachers have not fully grasped the opportunities provided," [6] but expressed the hope that the situation would change given the proposal before the Antiguan Cabinet to give CED(UWIDITE) graduates two increments as an incentive.

Table 1. Student numbers in the CED (UWIDITE) by year

	Jamaica	Barbados	Trinidad	Antigua	Dominica	St. Lucia	Grenada	Total
1983	18	5	6	-	6	8	-	43
1984	15	10	18	7	10	11	-	71
1985	32	5	10	5	4	9	-	65
1986	11	6	22	4	6	6	-	55
1987	7	3	6	3	3	3	1	26

A major reason for the small numbers is that in many of the Eastern Caribbean states, the Teachers Colleges do not offer the level of initial teacher training required for entry to the CED. In addition, the Faculties of Education at Cave Hill and St. Augustine have introduced similar programmes which compete for the same prospective candidates. For example, at the 1987 conference referred to above, a number of Eastern Caribbean states strongly urged the Faculty of Education to offer its Certificate in Education Management and Supervision via UWIDITE. In order not to pose a threat to existing programmes at St. Augustine and Cave Hill, Mona was asked to exclude applications from Trinidad and Barbados. Because the larger number of candidates (apart from Jamaica) tend to come from those two territories, the number of students in that programme (15) was so small as to make its viability questionable.

Fig. 2 compares performance of students in the CED (F/T) with those in the CED(UWIDITE) in the Introduction to Curriculum Theory, Planning and Practice course over a two-year period. Both sets of students were taught by the same lecturer over this time. In both years, the overall performance of the CED(F/T) students was superior. In 1985, for example, 82% of these students scored grades of A-B as compared with 46% of the CED(UWIDITE); and while 54% of the latter scored C-D grades, only 18% of the CED(F/T) scored similarly. More students dropped out of the UWIDITE than the Full-Time programme. For example, the UWIDITE 1983-85 cohort started with 50 and lost 7, while the 1984-86 cohort commenced with 71 and lost 4. There were no drop-outs in the Full-Time programme of 1985 and only one student withdrew from the 1986 batch. Worth noting, however, is the fact that the UWIDITE delivery system reached over twice the number of the Full Time programme (43 compared to 22 and in the following year 67 compared to 27).

7.2. Some difficulties

Considering the difficulties that the UWIDITE students experience, their overall performance is very fair. A major difficulty cited by the students[7] was the fact that they had insufficient time to study. Their normal work duties and the time it took them to travel to and from the UWIDITE Centres they considered time consuming. Some students complained of the costliness of transportation as well as the difficulties encountered with transport. For example, rural students in Dominica cannot get a bus to return home after 4.00 p.m. and have to stay overnight in the city till they get a bus at 1.00 p.m. the next day. Thus, for them to attend a class necessitates the loss of two full working days.

Another problem that the students encountered was the fact that the print materials invariably arrived too late for them to prepare in advance for the interactive sessions. This, they acknowledged, limited their participation in the sessions. Shortage of reference materials in the non-campus

territories was another serious problem.

7.3. Cost Effectiveness

Given the difficulties experienced especially by UWIDITE students in the NCCs, and given the advantages that the CED(F/T) students have in terms of the availability of the lecturer and access to the UWI library, (one of the most modern libraries in the Caribbean), the performance of the CED(UWIDITE) students compares quite favourably with the CED(F/T) students. The fact that the UWIDITE system can reach a larger audience spread over a wider geographical area and can also be used for training at a much faster rate than traditional forms of education, all speak in its favour. For example, over a period of 22 years from the time that the CED(F/T) was first awarded (1962-1984), Dominica had 12 persons trained. On the UWIDITE system it had 11 persons trained in the first two cohorts of students alone (graduates of 1985 and 1986). Clearly, this shows UWIDITE responding more directly to the needs of the NCCs.

But at what cost? The economic cost is the full cost to the UWI for training a full time student. The cost of training a CED(F/T) student at Mona is roughly J$ 15,000, while the cost of training a CED(UWIDITE) student is approximately J$ 7,400 [Lalor and Marrett 1986]. This figure, however, does not tell the full story. As Rumble [1988] argues, the costing of distance education is a difficult task. To some extent UWIDITE has succeeded by appealing to the goodwill of Faculty staff who were determined that the experiment would not fail. Such intrinsic motivation compensated for extrinsic rewards which were minimal. Payment for the writing of materials, for example, is miserly. Much of the cost administration of the CED(UWIDITE) is borne by the Department of the Faculty at Mona that administers the CED(F/T). Faculty staff perform administrative duties for a token remuneration. Any demonstrated cost effectiveness has to take 'hidden costs' into consideration.

Efficiency is concerned with the cost of achieving outputs [Rumble 1988]. Being cost-efficient is clearly an ideal objective of distance education programmes. But cost-efficiency at what cost? Specifically in relation to the CED(UWIDITE), having the specialist lecturer from Mona travel to the territories to examine the students they teach in Practice Teaching achieved a number of objectives. It enabled the lecturers to meet face-to-face with the students they had been hearing for over one academic year at least once during the course of training. It made it possible for the lecturers to meet not only the local supervisors but also the Resident Tutors and local UWIDITE Coordinators. Difficulties could be discussed and feedback from such contacts was valuable to the administration of the programme at Mona. Good inter-personal relations were fostered amongst people scattered in a wide geographical area who were vital to the smooth functioning of the programme. Not least is the fact that such travel was a source of motivation to the lecturers in that it enabled them to meet with colleagues and to familiarise themselves with other educational systems in the Caribbean. This compensated for any shortcomings in expected remuneration for the writing of teaching materials, etc. While the use of lecturers at Cave Hill and St. Augustine as examiners of Practice Teaching in the territories (except Jamaica) has reduced costs to some extent, one has to question whether such a reduction merits the loss of the benefits outlined above.

VIII. IMPROVING THE EFFICIENCY AND EFFECTIVENESS OF UWIDITE

Some of the areas where improvement is needed for the system to be able to exploit its full potential are outlined below.

8.1. Problems with the system: hardware and technical expertise.

Dewal (1988) cites the maintenance of hardware as a problem in many developing countries which have distance education programmes. An exception, he says, was India's Satellite Instructional Television Experiment (SITE) in the mid-1970s. While the audio quality of the UWIDITE system is generally good, there are frequent interruptions and disturbances on the telephone lines which have proven difficult to correct. Breakdowns in the service can be prolonged. For example, the telephone lines in Trinidad were down from May 20 to September 27, 1983, and since then disruptions in the service last as long as three weeks (Lalor and Marrett 1986). The telewriter frequently malfunctions and so is rarely used, while in the writer's experience it was never wise to plan an interactive session which relied on the SSTV as one could never be sure that the equipment was functioning at all the sites. This difficulty is exacerbated by the lack of qualified technical expertise. As Lalor and Marrett (1986:79) observe: "the technical areas are the weakest, as it has proven extremely difficult to employ and retain the people who are needed not only for maintenance but for system improvement and the contributions they make to the general development of programmes". In March 1984, for example, a senior technologist was appointed to UWIDITE. This person had overall responsibility for the technical maintenance of equipment, developing computer links and assisting users in incorporating the equipment into teleconferencing. The technologist, however, resigned within less than eighteen months to take up more lucrative employment.

8.2. Preparation of teaching materials: delivery to sites.

While most of the Faculty of Education staff involved in UWIDITE have produced the necessary teaching materials, the response from other Faculties in the UWI has not been so positive. Some have objected to writing the materials on the grounds that it amounts to spoonfeeding of students, while others insist that their subject simply cannot be taught in that way. The time consuming nature of the task is also problematic for some lecturers since they have to take it on alongside their normal work duties. The lead time for preparation also tends to be short. The remuneration offered is also quite miserly and discourages the lecturers from spending a great deal of time and creative energy on the preparation of print materials, especially as no agreement on the payment of royalties has as yet been worked out by the UWI which has the copyright of UWIDITE materials. To encourage the production of high quality materials such difficulties need to be ironed out. Not only does a more efficient courier system need to be put in place, but the planners need to give more careful thought to critical points in the operation of the system in an effort to ensure that the materials reach the users in good time. As Villarroel (1988) says, there are a number of different processes involved in distance education which must all be carefully synchronized as the programming does not allow for

much flexibility in respect of time intervals set. Long enough lead times for the preparation of materials must be given. At the same time deadlines must be met to enable timely production of materials and delivery dates. "Clear and unambiguous formulation of the necessary procedures, and of tolerance levels in the event of non-compliance, is essential" (Villarroel 1988:56).

8.3. Method of examination: feedback to students.

Perraton (1987) cites feedback to students as a difficulty in distance education which needs to be addressed. The method of examination used in the Faculty of Education is continuous assessment which involves students being given assignments at intervals which they must submit on specific dates. A major justification of this method rests in the value of periodic feedback to students on their strength and weaknesses, on the basis of which they can make improved efforts in subsequent assignments. This method of examination seems ideal for distance education. Dewal (1988:71) recommends a 20-30 days or less turn-round time for feedback to students, a longer time, he says, "positively demotivates the learner and shakes his faith in the system".

Timely feedback to the students, however, has been a weak area in the CED (UWIDITE). Once submitted at the various sites, the assignments can take several weeks to get to Mona where they are marked. This is due to bottlenecks in the mailing services and the courier system. Another major cause, however, is the already heavy work load carried by Faculty members who work on the UWIDITE system. They are already under pressure to provide timely feedback to an increasing student body in the intra-mural programmes. Because UWIDITE is regarded by some as 'extra work', which they do not have to do if they do not want to, the assignments done by the CED(UWIDITE) students are not treated with the urgency they should. The use of local supervisors/examiners would help to ease some of the pressure from the Faculty staff. This, however, necessitates the training of local expertise.

IX. CONCLUSION

In the context of declining economies and the rising cost of higher education, pressures have been put on the UWI to chart a path more as a development agency subject to the dictates of governments than as an elite intellectual centre free from interference from Church and State. The UWI has been challenged to shed the elitist image it once had as the UCWI modelled on the British universities, with light work loads for its staff, small classes and a small clientele of young undergraduates; and to cater instead to a wider population ranging from young school leavers to adults in the world of work needing on-the-job training. This necessitated the use of a more varied system for delivering its programmes - evening classes, summer courses, distance teaching.

UWIDITE has enabled the UWI to respond to such challenges and to meet more directly the needs of especially the NCCs. In 1984, UWIDITE was awarded the Gleaner Honour Award which is given annually in Jamaica to a person or organization in that year that has contributed most in bringing about a dramatic change for the better in the Jamaican quality of life. The Awards Committee was of the view that UWIDITE "was likely to have a dramatic impact on the quality and improvement of life not only in Jamaica, but in the entire Caribbean" (UWI News Notes, May 1985 No. 15, p.3).

UWIDITE could not have come at a more timely period in the history of the English-speaking Caribbean. The delivery of education and training by telecommunications systems worldwide is becoming highly competitive. Such systems in the developed countries are already competing for students in the Third World. If developing countries in the Caribbean and elsewhere cannot provide locally the education and training that their population needs, then the future augurs ill for the level of cultural invasion that advanced telecommunication systems can make possible. The problem of cultural relevance of curricula in the Third World will take on a dimension never before envisaged. The problem already exists in the Caribbean where a number of NCCs send their students for training abroad to universities that offer more competitive rates than the UWI, or where they participate in distance education programmes run by foreign universities.

There is no doubt that the UWI has to become more competitive by reducing its costs for programme delivery while at the same time maintaining high levels of both efficiency and academic excellence. Neither of these, however, can be achieved in a situation where additional work is put on an already heavily burdened staff. This is always a real danger in contexts where qualified personnel are in short supply. The advent of the CED(UWIDITE) in the Faculty of Education, for example, has created the need for a new type of university teacher with a level of versatility not hitherto demanded. The teacher needs not only expertise in voice projection, but also needs to have acquired skills in reading voices rather than body language, not to mention high levels of competence in the writing and development of teaching materials, and more than a nodding acquaintance with the use of telecommunication systems. Moreover, the teacher needs to be flexible and so versatile that in minutes he/she will be able to move from a face-to-face interaction in a conventional lecture situation to communicating with students by a telephone link-up which requires him/her to be more like a "catalyst (who) activates the skills and situation needed for self-education" (Villarroel 1988:57). Clearly, this calls for new directions in the training of university teachers.

Due to its regional nature, the effectiveness and efficiency of UWIDITE hinges on the use of the

Extra Mural Centres (EMCs) especially in the NCCs where they are used as UWIDITE sites. These EMCs need to be developed as resource/study centres which serve as information centres, consultation, tutorial and counselling venues. This is crucial because, as Dewal (1988) contends, "crises develop in the life of a distance learner and without guidance being provided locally, the learner will experience a sense of isolation and helplessness, given that the seat of management of his programme is several thousand miles away." Such developments in the EMCs would obviously necessitate some changes in the role and responsibilities of Resident Tutors for which they should be adequately compensated and recognised.

Distance teaching at the UWI, however, needs to be varied in its delivery. The sophistication of telecommunication is not applicable in certain territories where transportation to a UWIDITE site requires the loss of so much time in a working week that it defeats a major purpose of distance learning. The establishment of more UWIDITE sites intra-island may be one solution, though this itself is expensive. Another alternative is the use of correspondence courses which would not necessitate much travel on the part of the rural Dominican student, for example. Radio education is another alternative which proved quite successful in a project for the continuing education of primary rural health care workers in Jamaica in the early 1980s (Halliwell 1987). The problem with radio is that it is not as trendy as television but "financial stringency is forcing authorities to look at every possible means of saving money without sacrificing efficiency. Radio, with support print materials, may provide a good way of doing that" (Halliwell 1987:14).

Distance teaching by radio is within the short term plan of UWIDITE and efforts are already well underway to make this a reality in Jamaica. Indeed, the future holds a lot in store for UWIDITE and, judging from the response of Ministers of Education in the region at the conference held at Mona in April 1987, there is a tremendous amount of goodwill and support for the effective institutionalization of UWIDITE in the Caribbean educational systems in the near future.

Notes

1. These are Anguilla, Antigua, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts-Nevis, St. Lucia, St. Vincent, Trinidad and Tobago, the Cayman Is., Montserrat, the British Virgin Is., Turks and Caicos Is.

2. This cost is computed on a University wide basis for each Faculty and the NCCs receive a discount which is financed by the campus countries.

3. Project Satellite linked the Mona and Cave Hill campuses via two NASA satellites. The programme included discussions on rural medical care, agricultural research, family life education in schools, the education of the Hearing Impaired, Early Childhood Education and University Administration.

4. SSTV is used to transmit and receive still images (e.g. a diagram). It serves a similar purpose as an overhead projector. The telewriter is a substitute for the traditional blackboard. Each unit consists of a pad with a special pen for writing, a microprocessor and a video monitor. As the pad is written on, the image is digitised and transmitted simultaneously to all the Centres.

5. 2.30 - 4.30 p.m. (Jamaica time): 3.30 - 5.30 p.m. (Eastern Caribbean time).

6. Proceedings UWIDITE Conference, April 1 & 2, 1987, Mona, Jamaica, p.26.

7. This information was obtained from the students' evaluation of the units of the Introduction in Curriculum Theory, Planning and Practice course. One question asked them to identify difficulties which they felt affected their performance in the course.

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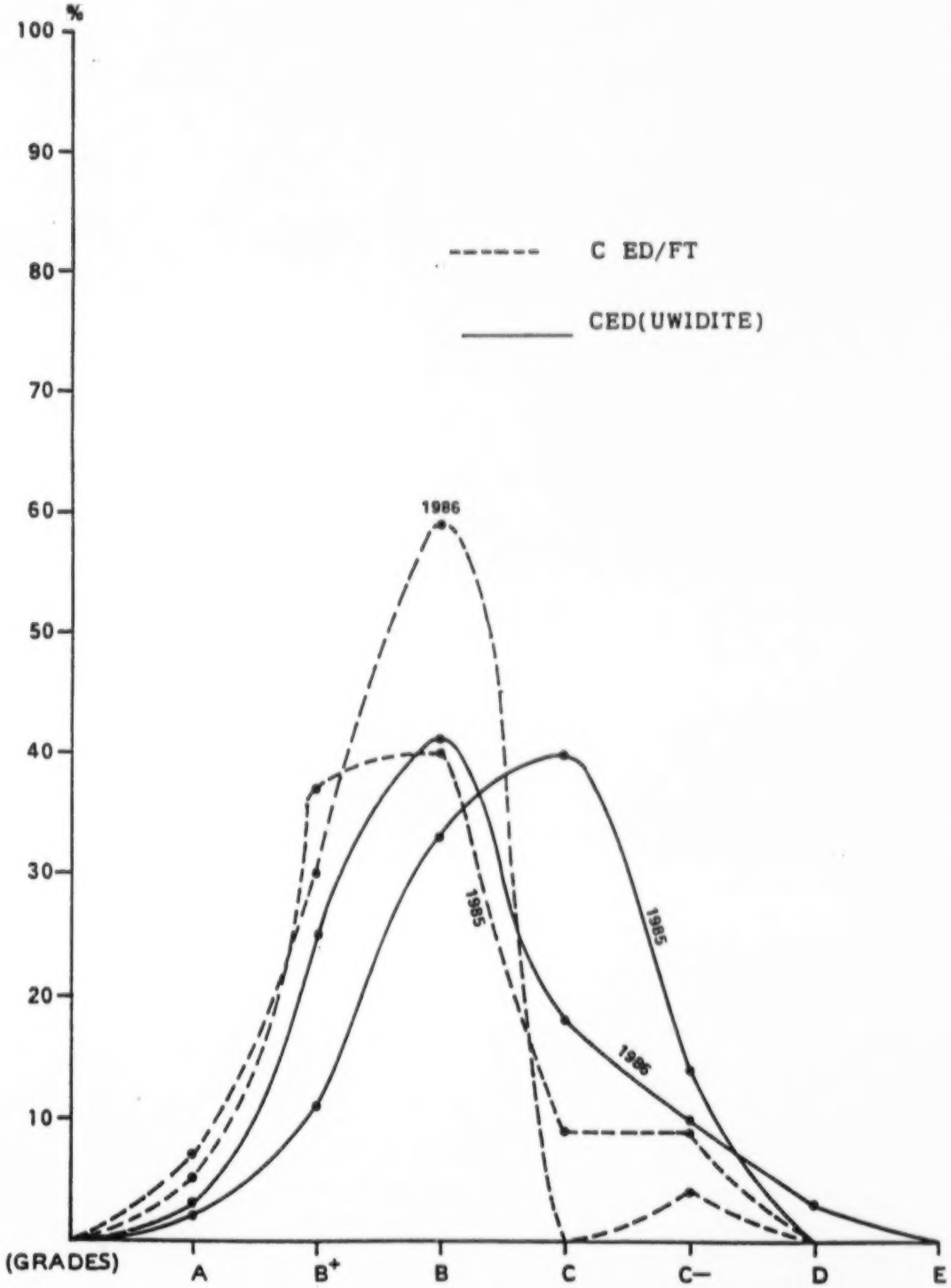
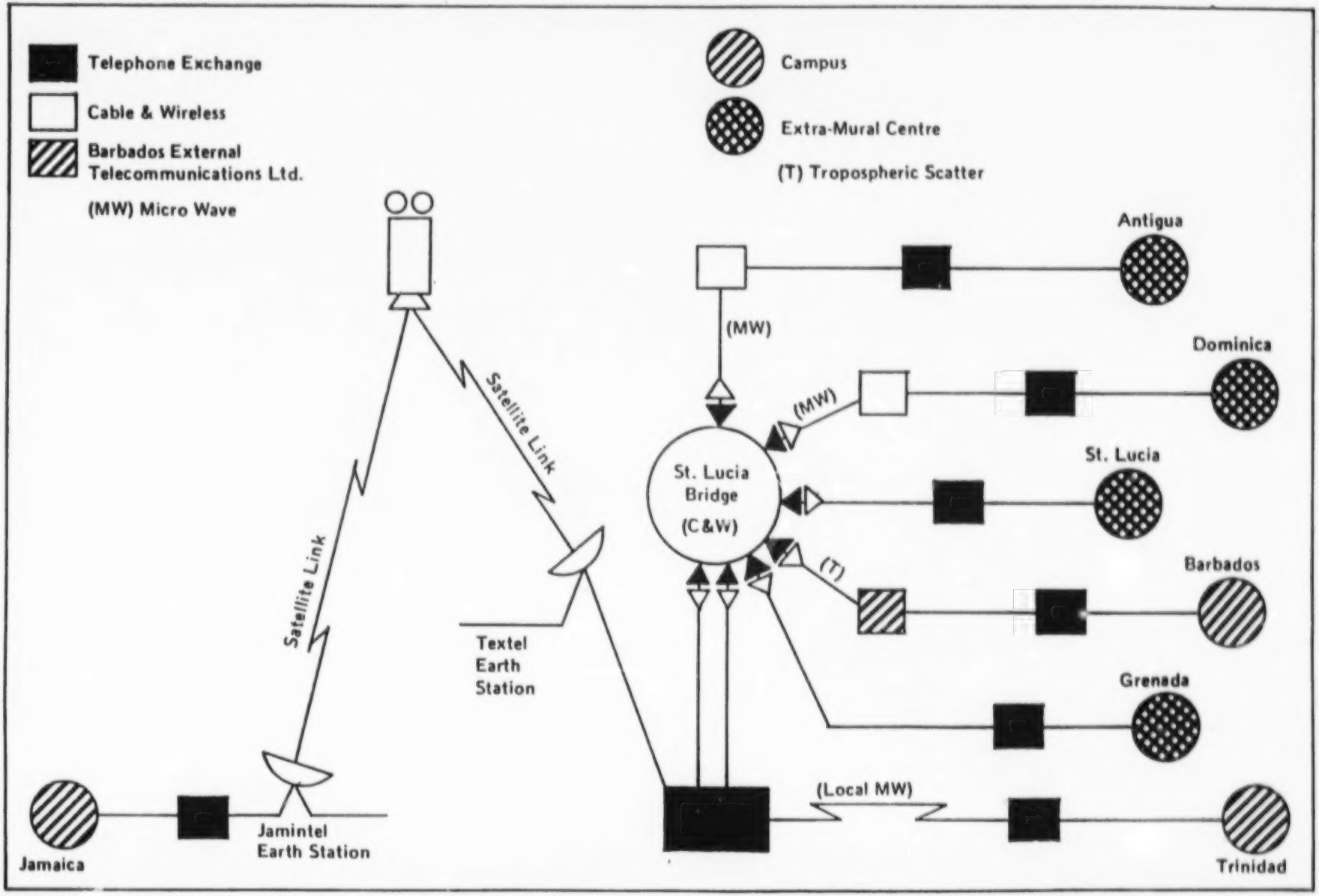


Fig. 2. Performance of Graduating Classes of 1985 & 1986 in the CEDF/T and CEDUWIDITE in Introduction to Curriculum Theory, Planning & Practice.

FIG. I: UWIDITE TELECOMMUNICATIONS NETWORK



(Source: Modification of Lalor and Marrett 1986)